

WHAT IS CLAIMED IS:

1. An inspection device that identifies defects on a subject of inspection including photomasks or products fabricated using photomasks, comprising:

a reference data generator that generates reference data that is based on design data and includes sensitivity class codes that are used to differentiate designated pattern functions by means of inspection sensitivity;

an inspection sensitivity setter that allocates desired inspection sensitivities for said sensitivity class codes;

an image acquiring unit that photographs the subject of the inspection and generates data to be inspected;

a comparator that compares said data to be inspected with said reference data and detects a defect;

a reference data extractor that extracts a region of said reference data that corresponds to where said detected defect exists;

a defect registration determinator that refers to said sensitivity class codes in said region and determines whether to register said defect; and

a defect memory that records said defect for which registration has been determined.

2. The inspection device according to claim 1, wherein said sensitivity class codes are expressed as at least one of a numeral, symbol, and letter.

5 3. The inspection device according to claim 1, wherein said defect registration determinator creates a defect determination range by enlarging a region associated with said pattern function, and based on overlap of said defect and said defect determination range,  
10 determines whether to register said defect.

4. The inspection device according to claim 3, wherein said defect registration determinator detects which of said pattern functions said defect is associated  
15 with based on said overlap, and based on said inspection sensitivity that has been allocated to said detected pattern function, determines whether to register said defect.

20 5. The inspection device according to claim 1, wherein it is possible to set said sensitivity class codes for regions other than those associated with said pattern functions.

25 6. An inspection method to identify defects on a subject of inspection including photomasks or products fabricated using photomasks, comprising the steps

of:

(a) generating reference data that is based on design data and includes sensitivity class codes that are used to differentiate designated pattern functions by means of inspection sensitivity;

(b) allocating desired inspection sensitivities for said sensitivity class codes;

(c) photographing the subject of the inspection and generating data to be inspected;

(d) comparing said data to be inspected with said reference data and detecting a defect;

(e) extracting a region of said reference data that correspond to where said detected defect exists;

(f) determining whether to register said defect, by referencing the sensitivity class codes of the pattern functions in the extracted region; and

(g) recording said defect for which registration has been determined.

7. The inspection method according to claim 6, wherein said sensitivity class codes are expressed as at least one of a numeral, symbol, and letter.

8. The inspection method according to claim 6, said determining step (f) comprising the substeps of:

(f1) creating a defect determination range by enlarging a region associated with said pattern function;

and

(f2) based on overlap of said defect and said defect determination range, determining whether to register said defect.

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9. The inspection method according to claim 8, said determining substep (f2) comprising the substeps of:

based on said overlap, detecting which of said pattern functions said defect is associated with; and

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based on said inspection sensitivity that has been allocated to said detected pattern function, determining whether to register said defect.

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10. The inspection method according to claim 6, wherein said generating step (a) sets sensitivity class codes also for regions other than those associated with said pattern functions.